

AMENDMENTS

Please amend the claims as follows.

1. – 60. **(Canceled)**

61. **(New)** An apparatus for generating a mist, the apparatus having an outlet end, the apparatus comprising:

a housing defining:

a transport gas passage having a transport gas inlet and a transport gas outlet, the transport gas passage defining a transport nozzle at least having a converging portion, wherein the transport nozzle terminates at the transport gas outlet;

a working fluid passage having a working fluid inlet and a working fluid outlet, the working fluid passage defining a working nozzle between the working fluid inlet and the working fluid outlet, the working fluid nozzle having a converging portion, wherein the working nozzle terminates at the working fluid outlet;

wherein the working fluid outlet is adjacent to the transport gas outlet, the working fluid outlet and the transport gas outlet are separated by a knife edge, and the transport gas outlet is angled toward the working fluid issuing from the working fluid outlet;

a source of transport gas connected to the transport gas inlet; and

a source of working fluid connected to the working fluid inlet.

62. **(New)** The apparatus of claim 61 wherein the transport nozzle and the transport gas outlet are annular.

63. **(New)** The apparatus of claim 61 wherein the working nozzle and the working fluid outlet are annular.
64. **(New)** The apparatus of claim 63 wherein the housing has an axis and wherein the working nozzle is defined by a working nozzle outer surface facing inward toward the axis and a working nozzle inner surface facing outward away from the axis; wherein at least part of the working nozzle outer surface converges toward the axis in a direction along the axis toward the outlet end.
65. **(New)** The apparatus of claim 61 wherein the transport nozzle, the transport gas outlet, the working nozzle, and the working fluid outlet are annular.
66. **(New)** The apparatus of claim 61 wherein the working fluid outlet circumscribes the transport gas outlet.
67. **(New)** The apparatus of claim 61 wherein the transport nozzle is a supersonic nozzle and further includes a diverging portion and a throat located between the converging portion and the diverging portion, wherein the diverging portion terminates at the transport gas outlet.
68. **(New)** The apparatus of claim 61 wherein the converging portion of the working nozzle terminates at the working fluid outlet.
69. **(New)** The apparatus of claim 61 further comprising a mixing chamber at the outlet end, wherein the transport gas outlet and the working fluid outlet terminate at the mixing chamber.
70. **(New)** The apparatus of claim 61 wherein the transport gas passage further comprises a transport gas plenum located between the transport gas inlet and the transport nozzle.

71. **(New)** The apparatus of claim 61 wherein the working fluid passage further comprises a working fluid plenum located between the working fluid inlet and the working nozzle.
72. **(New)** The apparatus of claim 61 wherein:
- the transport gas passage further comprises a transport gas plenum located between the transport gas inlet and the transport nozzle;
 - the working fluid passage further comprises a working fluid plenum located between the working fluid inlet and the working nozzle; and
 - the transport nozzle, the transport gas outlet, the working nozzle, the working fluid outlet, the transport gas plenum, and the working fluid plenum are annular.
73. **(New)** The apparatus of claim 72 wherein the working fluid outlet circumscribes the transport gas outlet.
74. **(New)** The apparatus of claim 72 wherein the transport nozzle is a supersonic nozzle and further includes a diverging portion and a throat located between the converging portion and the diverging portion, wherein the diverging portion terminates at the transport gas outlet.
75. **(New)** The apparatus of claim 74 wherein the converging portion of the working nozzle terminates at the working fluid outlet and wherein the working fluid outlet circumscribes the transport gas outlet.
76. **(New)** The apparatus of claim 61 wherein the source of transport gas comprises a steam generator.

77. **(New)** The apparatus of claim 61 wherein the transport gas passage and the working fluid passage are separate within the housing between the transport gas inlet and the transport gas outlet, and between the working fluid inlet and the working fluid outlet.
78. **(New)** An apparatus for generating a mist, the apparatus having an outlet end, the apparatus comprising:
- a transport gas passage inside the apparatus and having a transport gas inlet and a transport gas outlet, the transport gas passage defining a supersonic transport nozzle having a converging portion, a diverging portion, and a throat located between the converging portion and the diverging portion, wherein the diverging portion terminates at the transport gas outlet;
 - a working fluid passage inside the apparatus and having a working fluid inlet and an annular working fluid outlet, the working fluid passage defining a working nozzle between the working fluid inlet and the working fluid outlet, the working fluid nozzle having a converging portion, wherein the working nozzle terminates at the working fluid outlet;
 - wherein the working fluid outlet is adjacent to the transport gas outlet and the transport gas outlet is angled toward the working fluid issuing from the working fluid outlet.
79. **(New)** The apparatus of claim 78 wherein the transport nozzle and the transport gas outlet are annular.
80. **(New)** The apparatus of claim 78 wherein the working nozzle is annular.
81. **(New)** The apparatus of claim 78 wherein the transport nozzle, the transport gas outlet, and the working nozzle are annular.

82. **(New)** The apparatus of claim 78 wherein the working fluid outlet circumscribes the transport gas outlet.
83. **(New)** The apparatus of claim 78 wherein the converging portion of the working nozzle terminates at the working fluid outlet.
84. **(New)** The apparatus of claim 78 further comprising a mixing chamber at the outlet end, wherein the transport gas outlet and the working fluid outlet terminate at the mixing chamber.
85. **(New)** The apparatus of claim 78 wherein the transport gas passage further comprises a transport gas plenum located between the transport gas inlet and the transport nozzle.
86. **(New)** The apparatus of claim 78 wherein the working fluid passage further comprises a working fluid plenum located between the working fluid inlet and the working nozzle.
87. **(New)** The apparatus of claim 78 wherein:
- the transport gas passage further comprises a transport gas plenum located between the transport gas inlet and the transport nozzle;
- the working fluid passage further comprises a working fluid plenum located between the working fluid inlet and the working nozzle; and
- the transport nozzle, the transport gas outlet, the working nozzle, the transport gas plenum, and the working fluid plenum are annular.
88. **(New)** The apparatus of claim 87 wherein the working fluid outlet circumscribes the transport gas outlet.

89. **(New)** The apparatus of claim 88 wherein the converging portion of the working nozzle terminates at the working fluid outlet.
90. **(New)** A fire suppression system comprising the apparatus of claim 78, a source of pressurized gas connected to the transport gas inlet, and a source of water connected to the working fluid inlet.
91. **(New)** The fire suppression system of claim 90 wherein the source of transport gas comprises a steam generator.
92. **(New)** The apparatus of claim 78 wherein the apparatus has an axis and wherein the working nozzle is defined by a working nozzle outer surface facing inward toward the axis and a working nozzle inner surface facing outward away from the axis; wherein at least part of the working nozzle outer surface converges toward the axis in a direction along the axis toward the outlet end.
93. **(New)** The apparatus of claim 78 wherein the transport gas passage and the working fluid passage are separate within the apparatus between the transport gas inlet and the transport gas outlet, and between the working fluid inlet and the working fluid outlet.
94. **(New)** An apparatus for generating a mist, the apparatus having an outlet end, the apparatus comprising:
- a housing defining:
 - a transport gas passage having a transport gas inlet and an annular transport gas outlet, the transport gas passage defining a transport nozzle at least having a converging portion, wherein the transport nozzle terminates at the transport gas outlet;

a working fluid passage having a working fluid inlet and an annular working fluid outlet, the working fluid passage defining a working nozzle between the working fluid inlet and the working fluid outlet, the working fluid nozzle having a converging portion, wherein the working nozzle terminates at the working fluid outlet; and

wherein the working fluid outlet is adjacent to the transport gas outlet; and

a source of transport gas connected to the transport gas inlet.

95. **(New)** The apparatus of claim 94 wherein the working fluid outlet and the transport gas outlet are separated by a knife edge.
96. **(New)** The apparatus of claim 94 wherein the transport gas outlet is angled toward the working fluid issuing from the working fluid outlet.
97. **(New)** The apparatus of claim 94 wherein the working fluid outlet circumscribes the transport gas outlet.
98. **(New)** The apparatus of claim 94 wherein the working nozzle circumscribes the transport nozzle.
99. **(New)** The apparatus of claim 94 wherein the transport nozzle is a supersonic nozzle and further includes a diverging portion and a throat located between the converging portion and the diverging portion, wherein the diverging portion terminates at the transport gas outlet.
100. **(New)** A fire suppression system comprising the apparatus of claim 99, and a source of water connected to the working fluid inlet.

101. **(New)** A method of suppressing a fire comprising using the apparatus of claim 99 to spray the mist comprising water droplets on the fire.
102. **(New)** The apparatus of claim 94 wherein the converging portion of the working nozzle terminates at the working fluid outlet.
103. **(New)** The apparatus of claim 94 further comprising a mixing chamber at the outlet end, wherein the transport gas outlet and the working fluid outlet terminate at the mixing chamber.
104. **(New)** The apparatus of claim 94 wherein the transport gas passage further comprises a transport gas plenum located between the transport gas inlet and the transport nozzle.
105. **(New)** The apparatus of claim 104 wherein the transport gas plenum is annular.
106. **(New)** The apparatus of claim 94 wherein the working fluid passage further comprises a working fluid plenum located between the working fluid inlet and the working nozzle.
107. **(New)** The apparatus of claim 106 wherein the working fluid plenum is annular.
108. **(New)** The apparatus of claim 94 wherein:
 - the transport gas passage further comprises a transport gas plenum located between the transport gas inlet and the transport nozzle;
 - the working fluid passage further comprises a working fluid plenum located between the working fluid inlet and the working nozzle; and
 - the transport gas plenum and the working fluid plenum are annular.

109. **(New)** The apparatus of claim 108 wherein the working fluid outlet circumscribes the transport gas outlet.
110. **(New)** The apparatus of claim 108 wherein the transport nozzle is a supersonic nozzle and further includes a diverging portion and a throat located between the converging portion and the diverging portion, wherein the diverging portion terminates at the transport gas outlet.
111. **(New)** The apparatus of claim 110 wherein the converging portion of the working nozzle terminates at the working fluid outlet and wherein the working fluid outlet circumscribes the transport gas outlet.
112. **(New)** The apparatus of claim 110 wherein the working fluid outlet and the transport gas outlet are separated by a knife edge.
113. **(New)** The apparatus of claim 110 wherein the transport gas outlet is angled toward the working fluid issuing from the working fluid outlet.
114. **(New)** The apparatus of claim 94 further comprising a source of working fluid connected to the working fluid inlet.
115. **(New)** The fire suppression system of claim 100 wherein the source of transport gas comprises a steam generator.
116. **(New)** The apparatus of claim 94 wherein the apparatus has an axis and wherein the working nozzle is defined by a working nozzle outer surface facing inward toward the axis and a working nozzle inner surface facing outward away from the axis; wherein at least part of the working nozzle outer surface converges toward the axis in a direction along the axis toward the outlet end.

117. **(New)** The apparatus of claim 94 wherein the transport gas passage and the working fluid passage are separate within the apparatus between the transport gas inlet and the transport gas outlet, and between the working fluid inlet and the working fluid outlet.
118. **(New)** A decontamination system comprising the apparatus of claim 78 and a source of pressurized gas connected to the transport gas inlet, wherein decontamination chemicals are entrained into the apparatus.
119. **(New)** A gas turbine inlet air cooling system comprising the apparatus of claim 78, a source of pressurized gas connected to the transport gas inlet, and a source of water connected to the working fluid inlet.
120. **(New)** An industrial gas scrubber for scrubbing particulate materials from a gas stream comprising the apparatus of claim 78 wherein chemical additives are entrained through the apparatus.
121. **(New)** A method of decontamination comprising entraining decontamination chemicals through the apparatus of claim 94.
122. **(New)** A method of cooling inlet air for a gas turbine comprising using the apparatus of claim 94 to spray the mist comprising water droplets into the gas turbine inlet air.
123. **(New)** A method of scrubbing particulate materials from a gas stream comprising entraining chemical additives through the apparatus of claim 94.